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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/851,277	05/08/2001	Tae-Sung Jung	5649-894	3420
20792	7590	04/20/2006	EXAMINER	
MYERS BIGEL SIBLEY & SAJOVEC			CHEN, ALAN S	
PO BOX 37428				
RALEIGH, NC 27627			ART UNIT	PAPER NUMBER
			2182	

DATE MAILED: 04/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	09/851,277	JUNG ET AL.
Examiner	Art Unit	
Alan S. Chen	2182	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1)  Responsive to communication(s) filed on 2/8/06.
- 2a)  This action is FINAL. 2b)  This action is non-final.
- 3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4)  Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5)  Claim(s) \_\_\_\_\_ is/are allowed.
- 6)  Claim(s) 1,2,5,11,12 and 15 is/are rejected.
- 7)  Claim(s) 3,4,6-10,13,14 and 16-20 is/are objected to.
- 8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9)  The specification is objected to by the Examiner.
- 10)  The drawing(s) filed on 21 May 2001 is/are: a)  accepted or b)  objected to by the Examiner. Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a). Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a)  All b)  Some \* c)  None of:
  1.  Certified copies of the priority documents have been received.
  2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

*173m. Fleming*  
Supervisory FRITZ FLEMING  
PRIMARY EXAMINER 4/14/2006  
GROUP 2100

#### Attachment(s)

- 1)  Notice of References Cited (PTO-892)
- 2)  Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3)  Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4)  Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 5)  Notice of Informal Patent Application (PTO-152)
- 6)  Other: \_\_\_\_\_.

## DETAILED ACTION

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 02/08/2006 has been entered.

### ***Response to Arguments***

2. Applicant's arguments with respect to the rejection(s) of claim(s) 1-20 under 35 U.S.C 103 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made with the prior art references to Adachi and US Pat. No. 5,262,868 to Kaneko et al. (Kaneco) for a subset of the claims. Applicant argues against the use of Adachi because the memory card (element 14) is powered by the camera (element 1), when it is attached. While the Examiner does not disagree with this assertion, Kaneko, who uses a very similar camera design using a removable memory card (element 50), teaches that the memory card should have a battery to retain the data in the memory card when it is removed from the camera. Due to the broadness of the claims, the memory card battery is indeed a memory supply voltage that is independent of both the memory controller (element 10) and the channel line (elements 122 and 124).

claims use the word "responsive" without defining the claims the metes and bounds of what the applicant wishes to cover.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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6. Claims 1,2,5,11,12 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Adachi in view of US Pat. No. 5,262,868 to Kaneko.

7. Per claims 1 and 11, Adachi discloses a memory interface system and data processing system (see FIGURE), comprising: at least one channel line (elements 122 and 124) that couples a memory (element 14, the memory card) to a memory controller (element 10), the at least one channel line being responsive to a terminal voltage (element 120 is attached to 3V power source to power the line) that is independent of a memory controller supply voltage (element 19, processing device is fixed to a 5V power source, element 130). Note, applicant uses "responsive" in the claims, however, nothing further limits this term. Adachi further discloses the memory card can be implemented in SRAM (Column 3, lines 40-45), which one of ordinary skill in the art knows that SRAM will lose memory once power is disconnected from it.

Adachi does not disclose expressly a battery power supply that resides within the memory card.

Kaneko expressly discloses a battery (element 51) resident in the memory card (element 50), expressly for the purpose of maintaining the data in the memory card when it is removed from the camera (see Background section of Kaneko).

Adachi and Kaneko are analogous art because they are from in cameras utilizing memory cards that are volatile.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use a battery in Adachi, one that is independent of all the other power

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supplies, in order to serve as the memory card power supply once the memory card is removed from the camera.

The suggestion/motivation for doing so would have been to retain data when memory card is detached from the camera.

Therefore, it would have been obvious to combine Adachi with Kaneko for the benefit of retaining memory card data regardless of connection or disconnection to the camera.

8. Per claims 2,5,12 and 15, Adachi combined with Kaneko disclose claims 1 and 11, wherein in Adachi one finds a memory card 14 that is either powered by a 3V or 5V source and read and writes are made to the memory card, which indicates transmitter and receivers are on the memory card. On the memory controller end, elements 25a and 25b show the transmitter/receiver for the memory controller. The transmitters and receivers are coupled by the channel lines, elements 122 and 124. In a situation when the memory card 14 is supplied at a 3V level, the switch 126 makes lines 122/124 and level shifter 20 and lines 114/112 responsive to the terminal voltage of the 3V camera supply, which is in turn independent of the camera's 5V supply.

#### ***Allowable Subject Matter***

9. Claims 3,4,6-10,13,14 and 16-20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is the statement of reasons for the indication of allowable subject matter: The prior art disclosed by the applicant and cited by the Examiner fail to teach

or suggest, alone or in combination, *all* the limitations of the independent claim(s) (claims 1 and 11), particularly the first and second receivers are powered by the memory supply voltage and the memory controller supply voltage (per claims 3,4,13 and 14); the transmitters use open-drain MOS transistors and receivers use differential amplifiers (per claims 6-9 and 16-19); and the magnitude of the terminal voltage is greater than magnitudes of memory supply voltage and controller supply voltage (per claims 10 and 20).

### ***Conclusion***

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Patents and patent related publications are cited in the Notice of References Cited (Form PTO-892) attached to this action to further show the state of the art with respect to channel lines having own separate voltage.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alan S. Chen whose telephone number is 571-272-4143. The examiner can normally be reached on M-F 9am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim N. Huynh can be reached on 571-272-4147. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ASC  
4/6/2006

*Fritz M. Fleming*  
FRITZ FLEMING  
Supervisory PRIMARY EXAMINER 4/4/2006  
GROUP 2100  
*442181*